

**CLAIMS**

1. A radio, comprising:

5 a duplexer;

a transmitter section coupled to the duplexer, the transmitter section transmitting at a center frequency; and

10 a receiver section coupled to the transmitter section, the receiver section including a first down conversion section comprising first and second mixers, said first and second mixers receiving a first local oscillator (LO) signal having a frequency equal to the center frequency of the transmitter section or a sub-harmonic thereof.

- 15 2. A radio as defined in claim 1, wherein the radio comprises a frequency division duplexed (FDD) radio.

3. A radio as defined in claim 1, wherein each of the first and second mixers has an output and further comprising:
- 20 a first high pass filter coupled to the output of the first mixer; and
- a second high pass filter coupled to the output of the second mixer.

4. A radio as defined in claim 3, wherein the first and second high pass filters comprise integrated DC blocking capacitors.

5. A radio as defined in claim 3, wherein the first and second high pass filters comprise cascaded single pole high pass filters.

6. A radio as defined in 3, wherein each of the first and second high pass filters has an output and a set of two mixers are attached to each of the first and second high pass filters.

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7. A radio as defined in claim 6, wherein the set of two mixers attached to the first high pass filter each has an output, the first mixer providing an in-phase (I) component at its output and the second mixer providing a quadrature (Q) component at its output,

5        wherein the set of two mixers attached to the second high pass filter each has an output, the first mixer providing an in-phase (I) component at its output and the second mixer providing a quadrature (Q) component at its output

and further comprising:

10        a first adder having a first input for receiving the output of the second mixer connected to the first high-pass filter, and a second input for receiving the output of the first mixer connected to the second high pass filter, said first adder having an output for providing an in-phase component base band signal (B.B.I.); and

15        a second adder having a first input for receiving the output of the first mixer connected to the first high-pass filter, and a second input for receiving the output of the second mixer connected to the second high pass filter, said second adder having an output for providing an quadrature component base band signal (B.B.Q.).

8. A method for minimizing the interference caused by the transmit signal produced by the transmit section on the receiver section of a frequency domain duplexed (FDD) radio, the receiver section having a first down conversion section, the method comprising the steps of:

5                    providing a local oscillator (LO) signal to the first down conversion section of the receiver, said LO signal having a frequency equal to the center frequency of the transmit signal or a sub-harmonic thereof; and  
                     filtering the output of the first down conversion section of the receiver.

10                   9. A method as defined in claim 8, wherein the filtering step comprises high pass filtering the output of the first down conversion section.

15                   10. A method as defined in claim 9, wherein the filtering step comprises using one or more DC blocking capacitors to filter the output of the first down conversion section.

20                   11. A method as defined in claim 9, filtering step comprises using one or more cascaded single pole high pass filters to filter the output of the first down conversion section.

12. A method as defined in claim 9, further comprising the step of:
- down converting the high pass filtered output using a second down conversion section.

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